Derivative Practice - power, product, quotient, chain III

Name_____

Find the derivative of the function below. **Do NOT simplify answer**.

1) $f(x) = \left( \frac{2}{3x} + 5x \right)^6 (x^3 + 4x - 6)^5$

Use the power, product, quotient, and chain rules to find the derivative of the following functions. **Simplify your answers**!

2) $f(x) = 3\sqrt[3]{x^4}$

3) $f(x) = \frac{x-2}{3}$

4) $f(x) = \frac{5}{2x^3}$

5) $f(x) = \frac{1}{(x^2+1)^2}$

6) $f(x) = \left( \dfrac{x^2 + 7}{x^2 - 2} \right)^4$

7) $f(x) = (2x+1)^3 (4x-5)^4$